

Claims

- SUB
B1
1. A permanent-magnet motor comprising:
 a stator having stator winding of plural phases; and
 a rotor facing to inside of the stator across a gap part, and having a
 rotor core and a permanent magnet provided to the rotor core,
 wherein the permanent magnet is made so as to have both of a
 convex part to an inner diameter side and a convex part to an outer diameter
 side in a cross section taken vertically to an axis; and
 wherein a focus of magnetic orientation of each magnetic pole of the
 permanent magnet is located outside of the rotor.
2. The permanent-magnet motor of claim 1, wherein the rotor is formed
 by a rotor core assembly made by multilayering multiple pieces of core
 laminations, each having plural containing holes for inserting the
 permanent magnets and the permanent magnets are inserted into the
 containing holes for inserting the permanent magnets; and
 wherein a thickness of the rotor core, which separates the permanent
 magnet and the gap, is made within $\pm 30\%$ of a thickness of the rotor core
 lamination.
3. The permanent-magnet motor of claim 1, wherein the rotor is formed
 by including the permanent magnets in an outer peripheral part of the rotor
 core and a non-magnetic protect pipe is attached around the permanent
 magnets.
4. The permanent-magnet motor of claim 1, wherein a containing hole
 is provided to the rotor core for inserting the permanent magnet; and
 wherein when a radius of an arc of an outer diameter side of the
- 25

00000000-00000000

SUB
B2

~~sid
erti~~

5

10

10

wherein a thickness of the rotor core, which separates the permanent magnet and the gap part, is made within $\pm 30\%$ of a thickness of the multiple rotor core laminations.

[illegible]